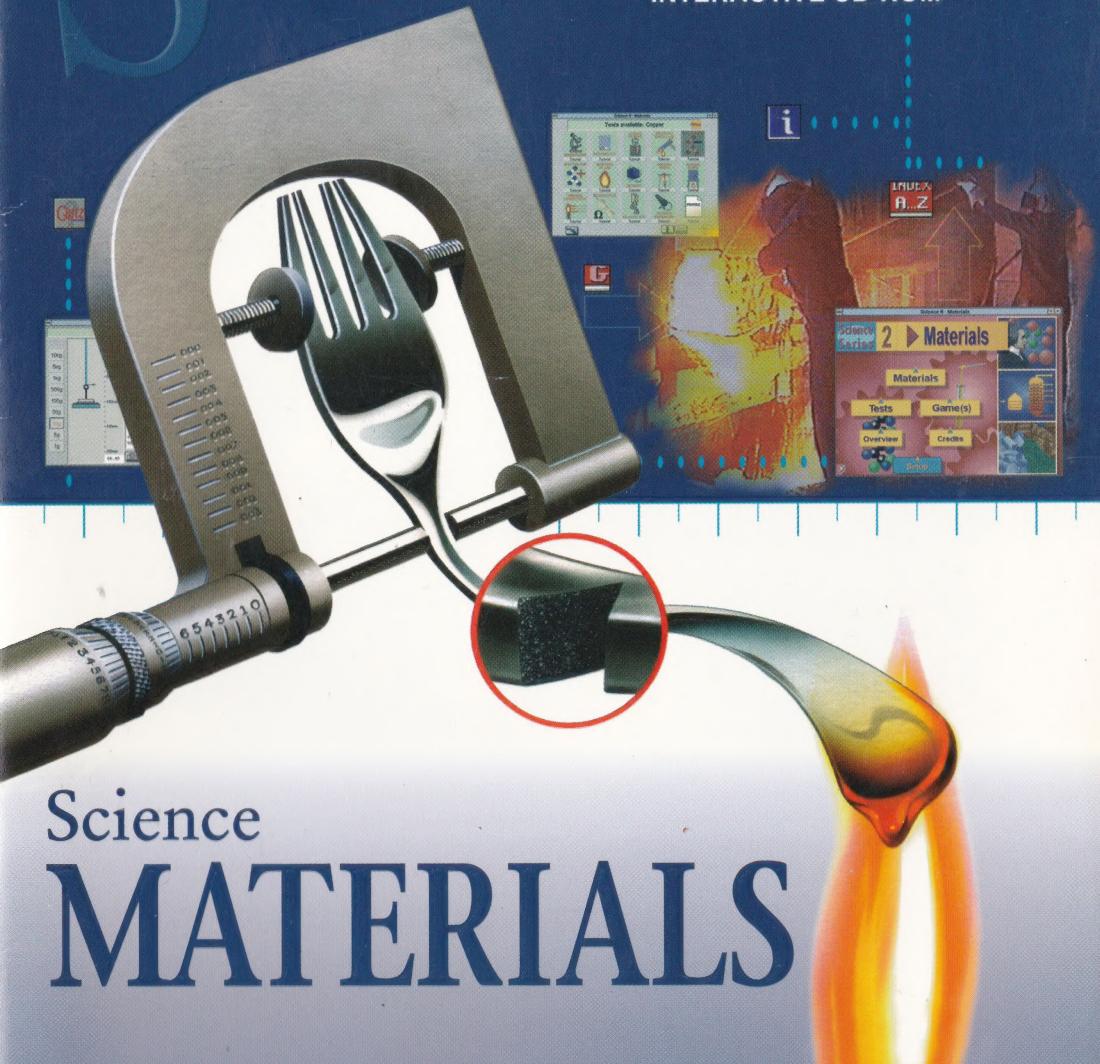


SCIENCE & NATURE

INTERACTIVE CD-ROM

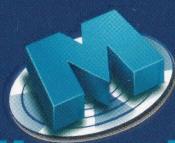


Science **MATERIALS**



User's Guide

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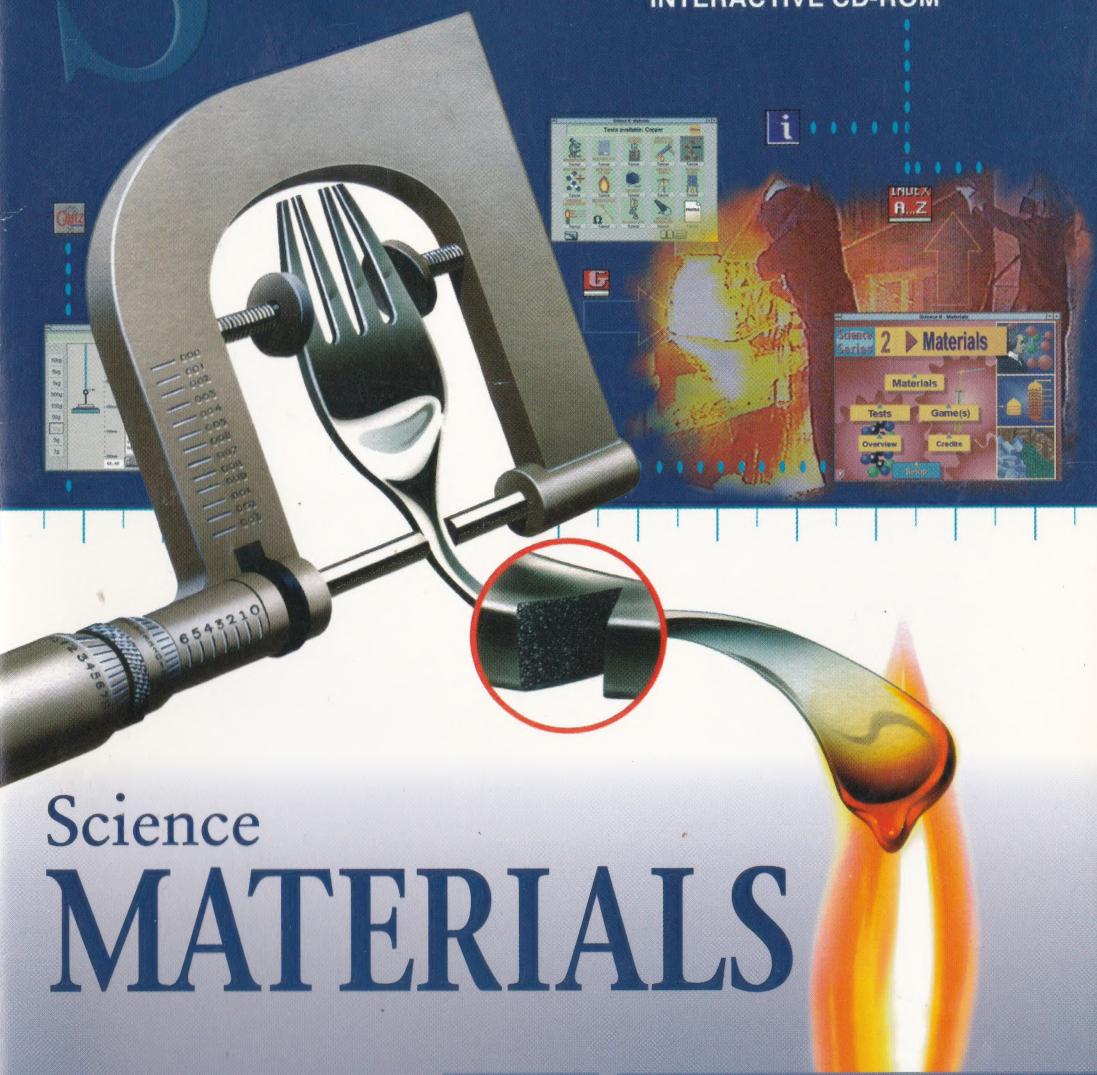
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SCIENCE & NATURE

INTERACTIVE CD-ROM



Science MATERIALS



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User's Guide

MATERIALS

CD-ROM USER GUIDE



© Yorkshire International Thomson
Multimedia 1995
First published by ILP and Yorkshire
Television 1995

Yorkshire International Thomson
Multimedia is a partnership between
Thomas Nelson & Sons Ltd
and Yorkshire Television Ltd.

Thomas Nelson is an International
Thomson Publishing Company

Manufactured & Distributed
in North America by

MENTOROM MULTIMEDIA™
a division of
BFS Entertainment
& Multimedia Limited
350 Newkirk Road
Richmond Hill
Ontario L4C 3G7
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For information call
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CONTENTS

Introduction	5
Getting started	7
System requirements	8
Installation	8
Running the application	10
The Materials CD-ROM	11
Contents	12
Special features	16
Guide to icons	18
Guided tours.....	20
The Scrapbook Application	23
Description	24
Icons	28
Appendix	29
About ILP	30
About YITM	31
Other CD-Rom titles	32

INTRODUCTION

Components of the pack

- CD-ROM
- User's guide
- Scrapbook floppy disk
- Registration card

Overview

Welcome to the Materials CD-ROM, one of a series of interactive science CD-ROMs developed by Interactive Learning Productions. The first disc in the series is Elements which won the European Multimedia Award for the best educational CD-ROM in 1993. Other titles in the series are planned for the future.

The Materials section of the disc takes the form of a database of information about the occurrence, history, extraction, production, applications and composition of 150 materials in everyday use. It can be used to investigate a wide range of materials from the food, chemical, engineering and mineral industries.

INTRODUCTION

The **Tests** section, includes 15 specific tests that can be applied to the materials. These tests range from the determination of chemical characteristics and properties, to the calculation of physical properties such as density, melting point and tensile strength. Each test contains **investigate** and **tutorial** sections. The latter describes each test and the reasons for applying it. The investigate section will show you the relevant tests for any chosen material. Each is illustrated with photographs and six include interactive animations.

The disc contains a feature that allows a teacher or parent to set exercises that require a student to discover the identity of a material by using various tests. The Set-up function can be used to conceal the identity of materials selected by the teacher or parent. The student then has to use the tests to discover the identity of the materials. The Set-up option is only available when the disc is started. It cannot be accessed once the disc is running.

A **Quiz** section lets you test your knowledge of the materials on the disc. You have to identify materials from the clues provided from the Materials and the Test sections.

The **Scrapbook** application supplied with this CD-ROM enables you to put together your own presentations, or can be used as a means of drawing together the results of an investigation for presentation or future reference.

GETTING STARTED

SYSTEM REQUIREMENTS

INSTALLATION

RUNNING THE CD-ROM

System requirements

The recommended specification is as follows:

- 486 based IBM PC compatible computer (386 minimum)
- 4 megabytes RAM
- SVGA Graphics (256 colours)
- MS-DOS 5.0 or above
- Microsoft Windows 3.1
- CD-ROM drive (double speed)
- Mouse
- Sound card

Installation

- 1 Start Windows.
- 2 Place the CD-ROM into your CD-ROM drive. Depending on the type of drive, you may have to put the disc into a caddy before proceeding.
- 3 Select 'Run...' from the File menu in Program Manager and type the following:

<drive>:\setup

Where <drive> is the drive letter of your CD-ROM.

For example, if your CD-ROM drive is set up as drive 'D', you would type the following:

d:\setup

Press **Enter** or click on **OK**. The Set-up program will now run.

- 4 Follow the instructions given in the Set-up program.
This will install the software and create a program group in Program Manager.
Parts of the software can be installed on your hard disk.
This makes it quicker to load than loading from the CD-ROM.
The performance may also be improved.
- 5 Install Video for Windows (version 1.1) on to your system.
If this has already been done, you can skip this step.
If you are not sure if you already have Video for Windows, you can reinstall it without any adverse affects.
- 6 Select 'Run...' from the File menu in Program Manager, and type the following:
<drive>\video\setup
Where <drive> is the drive letter of your CD-ROM.
This will be the same as the drive letter you entered in step 3.
For example, if your CD-ROM is set up as drive 'D', you would type the following:
d:\video\setup
Press Enter or click on **OK**.
The video Set-up program will now run.
- 7 Once the installation is complete, exit from Windows and reboot your system.

Running the CD-ROM

Once the installation procedures described above have been completed, you can use the Materials CD-ROM by following the simple steps set out below:

- 1 Start Windows.
- 2 Load the CD-ROM into your CD-ROM drive.
- 3 Select the Materials CD-ROM icon in Program Manager.
- 4 Double click on this icon:



MATERIALS CD-ROM

CONTENTS

SPECIAL FEATURES

GUIDE TO ICONS

GUIDED TOURS

CONTENTS

The disc is divided into three sections, Materials, Tests and the Quiz.

Materials



This section can be used to investigate a wide range of information about materials in everyday use.

The main menu groups the materials as follows:

Solids, liquids and gases

Metal, non-metal and others

Acid, neutral, basic

Manufactured or natural

Conductor, semi-conductor, insulator

Elements, compounds, mixtures

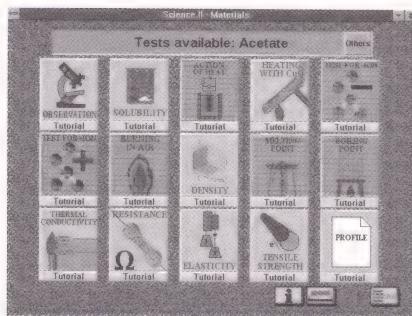
Organic, inorganic

For each group, information is available that explains the divisions within the group. Once a material has been selected you can access a general introduction and then investigate the following :

- History
- Occurrence
- Extraction
- Production
- Applications
- Composition
- Other relevant information

The information is comprehensively illustrated with photographs and video clips.

Tests



This section can be accessed directly from the main title screen or from anywhere in the Materials section.

It includes 15 standard tests for chemical and physical properties that can be applied, as appropriate, to the materials on the disc.

CONTENTS

The tests include :

1. Observation
2. Solubility
3. Action of heat
4. Heating with copper (II) oxide
5. Test for Negative Ion
6. Test for Positive Ion
7. Burning in air
8. Density
9. Melting point
10. Boiling point
11. Thermal conductivity
12. Resistance
13. Elasticity
14. Tensile strength
15. Profile

The tests are fully illustrated with colour photographs. Only the first test is suitable for all the materials. Subsequent tests are available for particular sub-sets of materials. Each test is accompanied by a tutorial that explains the test and its relevance.

An investigate section allows you to look at different stages in a test. Where relevant a conclusions section is included.

Tests 9 to 14 have an **interact** section. This uses animation to show the test in progress. You can provide and read off values during these experiments and calculate the physical constants associated with the materials.

Quiz



This interactive quiz has been designed to heighten awareness and reinforce concepts gained by using both the main sections of

the disc. It will test your knowledge of materials with the extra excitement generated by a race against time.

At the start of the quiz you will be given a clue to the identity of a mystery material. If you identify it at this stage you will gain maximum points. If not, you will be given an additional clue. A total of four clues are provided for each material.

The points awarded decrease for each additional clue.

SPECIAL FEATURES

Set-up

This provides users with the opportunity to customise the disc in order to provide a challenging situation for a student. It allows you to conceal the identity of materials you have selected. The student, whether in school or at home, then has to use the tests to provide clues that will lead them to the correct identity of the materials.

Remember that Set-up is only available from the title screen. It is from this screen that customised lists can be saved and loaded.

Audio glossary

In the world of science there are many words that may be unfamiliar to you. The glossary is designed to help you gain an understanding of these words. It can be used in two ways:

As you read the text you will notice that certain words are highlighted in red. Click on these to see a definition.

By clicking on the glossary icon, a full list of glossary words can be obtained. You can browse through these or type in a word you wish to have explained. When a word or phrase is selected from the glossary it is heard as well as its definition seen.

Interact sections

Six of the tests featured on this disc are interactive. These include tests for the following:

- Melting point
- Boiling point
- Thermal conductivity
- Resistance
- Elasticity
- Tensile strength

GUIDE TO ICONS

As you use this CD-ROM you will encounter icons that will enable you to get the most out of the disc. In each case, use the mouse to place the cursor over the required icon. Click on the left mouse button to activate the facility or tool.



Return to main menu



Gives help on the current section of the disc



Gives quick access to the TESTS section



Investigate

Provides information on the selected material



Glossary



Returns you to the previous screen



View current picture at full size



View current text at full size



Save information to a floppy disk or to the clipboard



Displays a video



Displays additional pictures (if available)



Gives quick access to the MATERIALS section of the disc



Others

Use to select other materials



Interact

Access the interactive experiment (where available)

Set-up



Save current Set-up to disc



Cancel current Set-up session – return to the main menu



Load Set-up from disc



Activate the current Set-up and return to the main menu. (From this point the user cannot return to the Set-up option)

Video controls



Plays the video



Jump to the first frame of the video



Rewinds the video



Pauses the video. Click again to resume play



Fast forwards the video while you keep it depressed



Jump to last frame of the video



Changes the video size from its maximum size to its minimum size and vice versa

GUIDED TOURS

You may find it useful to work through the following routines to familiarise yourself with the features of this disc. All selections are made by moving the mouse to place the cursor arrow on the appropriate icon and clicking the left hand button.

1. Guided tour of the Materials section

Action...

...to see

From the Main Menu select Materials

Text display showing classifications available

Click on **Introduction** in the Solids, Liquids and Gases section

Animated display and introduction to topic

Click on **Back** icon

Return to previous screen

Click on **Solids, Liquids and Gases**

Text display dividing the materials into three lists depending upon their state of matter

Double click on **Asbestos**

Text and graphical display giving a general introduction to this material

Click on **Applications** near the bottom of the screen

Text and graphical display

Click on **Full picture** icon

Picture shown at full size

Action...	...to see
Click on Back icon	Return to previous screen with small picture and text
Click on Video icon	Video controls click on forward arrow to play
Click on Back icon	Return to previous screen
Click on Others at the top of the screen to select a new material to investigate	List of materials
Now investigate a material of your choice.	

2. Guided tour of Atomic Structure

Action...	...to see
From the Main Menu, select TESTS	Display shows the tests available
Click on Tutorial in the Thermal Conductivity section	Text and graphical display explains the test
Click on the Back icon	Display showing the tests available

GUIDED TOURS

Action...

...to see

Click on the Others icon at the bottom of the screen	Allows the selection of required material from list
Click on Asbestos	Material displayed in the current material box
Click on Thermal Conductivity	Text and graphic display listing stages of experiment
Click on Interact icon	Text and graphic display. Animation controls appear to operate animated experiment
Click on Start icon	Animation of experiment
Click on Back icon	Return to previous screen
Select Calculate	Text and graphic display showing how to calculate thermal conductivity
Click on Conclusions icon	Text and graphic display providing the answer to the calculation. Were you correct in your calculations?
Click on the Back icon	Return to the previous screen
Click on Menu icon	Return to title screen
Now try experimenting with the TESTS section.	

THE SCRAPBOOK APPLICATION

INSTALLATION

GETTING STARTED

ICON GUIDE

Description

Scrapbook is an independent application, supplied on floppy disk, that can be used with any of the CD-ROMs produced by ILP. It enables you not only to create your own presentations and reference collections of multimedia information, it also enables you to add sound, text and material from other CD-ROMs from the same designers.

Each Scrapbook collection you create can be individually named, saved to floppy or hard disk and can be loaded and displayed later.

Installation

Running Scrapbook from floppy disk drive:

- 1 Put the Scrapbook floppy disk into the disk drive.
- 2 Double-click the **File Manager** icon.
- 3 From the File Menu choose **Run**.
- 4 In the Run Dialogue Box, type:

<drive>:\scrbook.exe

where <drive> is the disk drive of the floppy

e.g. A:\scrbook.exe

Running Scrapbook from your hard disk:

- 1 Put the Scrapbook floppy disk into the disk drive.
- 2 Click the **File Manager** icon.
- 3 Click File Menu and select **Run**.

- 4 In the Run Dialogue box, type:
`<drive>:\setup.exe`
where `<drive>` is the floppy disk.
e.g. `A:\scrbook.exe`
- 5 Follow the instructions given by the Set-up program.
- 6 Once installed on your hard disk, Scrapbook can be run by clicking on its icon without needing the Scrapbook floppy disk.

Getting started

Before you load Scrapbook, make sure that you have the CD-ROM you want to select items from in the CD-ROM drive.

1. Click on the Scrapbook icon
2. Click on the name of the CD-ROM you wish to use

The main Scrapbook menu will now appear on screen, enabling you to select the items you wish to add to your customised Scrapbook.

Reference Scrapbook

This is displayed on the left of your screen and lists all the items available on the CD-ROM. Scan through the list by using the scroll bar or arrow to find an item. You can also type in a word or phrase in the dialogue box in order to locate items quickly.

Once you have found the item you require, click on it. Scrapbook will now indicate the media options that are available for your selected item i.e.

SCRAPBOOK

1/4 frame image	(.bmp file)
full frame image	(.bmp file)
text	(.txt file)
video	(.avi file)
sound	(.wav file)

- Click on the check box to highlight any option NOT required
- Click on the **Add** button to add the item to your Scrapbook. Once you do this, the title of the item you have selected should appear in the Viewing Scrapbook on the right of your screen

Viewing Scrapbook

This provides you with the following options:

- Click on X to highlight the options you do not require.
- Click on the **Show** icon to view the selected page of your Scrapbook.
- Click on the **Delete** icon to delete the selected page of your Scrapbook.

Import icon

You can import pictures, text, sounds or video from other CD-ROMs or from the hard disk. Click on the **Import** icon and follow the steps below:

- 1 Type in the title you want to give to the page on which the item will appear. This title will appear in your Viewing Scrapbook.
- 2 Select the type of item you want to import from the following menu:

1/4 frame image	(.bmp file)
full frame image	(.bmp file)
text	(.txt file)
video	(.avi file)
sound	(.wav file)

- 3 Open File Manager.
- 4 Drag the required file and drop it into the dialogue box. To open the File Manager you may have to reduce the size of the Scrapbook application.

Other features

In addition to the Reference and Viewing options, the main Scrapbook menu also contains a number of icons that can be used to manipulate existing scrapbooks or create new ones.

New Scrapbook – creates a new Viewing Scrapbook. If you have not saved the one you are currently working on you will be prompted to do so.

Open Scrapbook – loads an existing Scrapbook file using standard Windows file opening procedures.

Save Scrapbook – saves the current Scrapbook.

Title – allows you to give each Scrapbook a unique and descriptive title.

Presentation – presents the pages of the current Viewing Scrapbook, starting with the first item in your list. You can then scroll through all the other items.

Change CD – enables you to select the appropriate CD-ROM title. To access a CD-ROM it must be loaded into the CD-ROM drive.

SCRAPBOOK ICONS

When you select the **Show** icon on the main Scrapbook screen, you will be taken to the Scrapbook-building screen. Depending on the data available and your selections in the check boxes in the Reference and Viewing Scrapbooks, you will see some or all of the following icons:



Back takes you back one step.



Save saves current text or picture to disk.



Print prints the text in the edit box.



Text displays the original text that appeared on the CD-ROM for the item you have selected.



Full picture shows the picture at full screen size.



Record allows you to add audio while playing back your presentation. However it will not be saved.



Video plays back video clips.

APPENDIX

ABOUT ILP

ABOUT YITM

OTHER CD-ROM TITLES

APPENDIX

About ILP

Interactive Learning Productions was formed as a research project at Newcastle University, England in 1986. One of its research objectives being to examine the application of new technology to learning.

ILP became an independent company in 1990 and its creativeness in the field of interactive learning rapidly gained international recognition.

Between 1990 and 1995, ILP won no less than eleven U.S., British and International Interactive Multimedia Awards including eight gold awards for its educational products. In 1993 and 1994/5 it won the International European Multimedia Gold Award for the best educational CD-ROMs in Europe.

In 1993 ILP became part of International Thomson Publishing, designing and producing educational titles for Nelson Multimedia and Yorkshire Television.

Currently ILP is producing interactive multimedia titles for Yorkshire International Thomson Multimedia and for a host of other commercial companies. Its range of products include CD-ROMs for education and training, interactive video and point of information materials.

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Ontario, L4C 3G7 Canada
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About YITM

Yorkshire International Thomson Multimedia came into being in February 1995. It represents one of the new breed of multimedia companies set up to leverage ideas and products across a number of media.

As a joint venture involving International Thomson Publishing and Yorkshire Television, YITM is in an ideal position to create and market educational television and interactive multimedia CD-ROM. Its close association with International Thomson Publishing and in particular with Thomas Nelson, the major UK schoolbook publisher means that print based products can be tied into the visual and interactive media.

Other CD-ROM titles

SCIENCE & NATURE SERIES

■ **Elements**

The 1993 European Multimedia Award winning CD-ROM that enables you to learn about the 104 elements in the Periodic Table and about Atomic structure in exciting, innovative and effective ways.

■ **Materials**

A fully interactive journey around the world of science that enables you to carry out real experiments on screen. Explore the properties and characteristics of over 150 materials and test your skills on a truly educational game that will help you learn as you play.

■ **Water**

Explore every aspect of water in the environment. Investigate its use in the home, industry and for transport, recreation and fishing. Seventeen in-depth case studies investigate major environmental issues on a world stage.

■ **Land and Air**

Investigates six major environmental issues including natural disasters, dwindling resources, conservation, food & famine, air quality and changing climate. Specially commissioned video sequences provide introductions to each issue which can then be examined in depth using powerful navigational tools.

■ The Physical World

An exploration of the physical features of the planet and the process that formed them. Case studies in the Natural Hazards section describe the causes and consequences of some of the most dramatic events of the natural world. The People and their Environment section examines the interaction between people and different environments.

■ Introduction to the Environment Series

Three packages that introduce environmental issues on separate CD-ROMs.

■ Conservation

Case studies of world famous national parks which are used to illustrate the benefits and difficulties of conserving wilderness, wild areas and threatened species.

■ Changing Climate

Explores the facts and theories of global warming and climatic change.

■ Dwindling Resources

Examine the ways in which the key natural resources of water, forest, oil and coal have been used over the last two hundred years to sustain and support lifestyles, and the effect this has had on the environment.

APPENDIX

HISTORY SERIES

■ World War II – Global Conflict

Winner of the International European Multimedia Award 1994/95 for the best educational CD-ROM title. Produced in collaboration with the US National Archive, this disc provides an exciting and accessible introduction to the events, themes and personalities of the Second World War. Five interactive video sequences provide a chronological introduction from which investigations in depth can be made using powerful search, retrieval and information handling tools.

■ World War II – Sources and Analysis

Uses original materials from the US National Archive to bring you the significant events of World War II as viewed not only by those who fought but also by those who lived and worked on the Home Front. The disc is divided into themes, case studies and source materials.

CIVILIZATION SERIES

■ Religions of the World

Eight major world religions can be investigated under the headings of beliefs, forms of worship, scriptures, artefacts, festivals, people, religious communities and places of worship. A separate section applies information from other parts of the disc to consider major contemporary issues.

LANGUAGE SERIES

■ **En Route**

A fully interactive multimedia CD-ROM to help you begin to learn French. It will involve you in a stimulating learning experience that uses multimedia to its full potential. Three levels of difficulty help you to learn at your own pace. Vocabulary and grammar support are available to assist with the hundreds of interactive exercises that will immerse you in the language. Record your own pronunciation and compare it with native speakers, test yourself and let the computer assist you to get things right.

■ **iEn Marcha!** (Intermediate Spanish)

En Marcha is an extensive and impressive language learning resource, containing thousands of pictures and graphics, an interactive dictionary and over two hours of spoken Spanish. It enables you to speak, hear, read and write the language in a variety of common and interesting everyday situations.

For further information about these and future titles contact:

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Ontario, L4C 3G7 Canada

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